



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,279	10/21/2003	Gregory D. Hoshal	33727.80390-001	4563
24335	7590	06/16/2005	EXAMINER	
WARNER NORCROSS & JUDD LLP			KWOK, HELEN C	
900 FIFTH THIRD CENTER			ART UNIT	
111 LYON STREET, N.W.			PAPER NUMBER	
GRAND RAPIDS, MI 49503-2487			2856	

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/690,279

Applicant(s)

HOSHAL, GREGORY D.

Examiner

Helen C. Kwok

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2005 and 01 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8-18, 20-42, 44-49, 57 and 58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-18, 20-42, 44-49, 57-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 25-34 are objected to because of the following informalities. Appropriate correction is required.

In claim 25, line 3, the phrase "an angular rate sensor" should be changed to – an angular rate filter --.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6, 8-12, 17-18, 20-42, 44-46 and 57-58 are rejected under 35 U.S.C. 102(b) as being anticipated by either U.S. Patent 6,305,221 (Hutchings) or U.S. Patent 5,255,565 (Judd et al.) or U.S. Patent 5,615,132 (Horton et al.).

The references, Hutchings, Judd et al., Horton et al., disclose a data recorder comprising an angular rate sensor producing an angular rate sensor output; a processor coupled to the angular rate sensor; a memory coupled to the processor for storing the angular rate sensor; an angular rate filter coupled to the angular rate sensor and the processor for allowing the angular rate sensor output to reach the processor only when

the angular rate sensor output is within a frequency range. (See, Figure 16 of Hutchings; Figure 1 of Judd et al.; Figure 2 of Horton et al.; Figure 1 of Horton et al.).

With regards to claims 2-6, 8-9, the references, Hutchings, Judd et al., Horton et al., suggest a storing means, continuous sampling means, filter, gain circuit and an A/D converter as claimed in these claims. (See, column 23, line 23 to column 25, line 28 of Hutchings; column 4, line 55 to column 10, line 5 of Judd et al.; column 3, line 27 to column 8, line 11 of Horton et al.).

With regards to claims 10-12, the references, Hutchings, Judd et al., Horton et al., disclose a linear accelerometer for producing a linear accelerometer output wherein the linear accelerometer output is compared to a threshold and stored if the output exceeds the threshold. (As observed in the figures as suggested above for each of the references).

With regards to claims 17-18, 20, the claims are commensurate in scope with claims 1-16 and are rejected for the same reasons as set forth above. (claiming a first linear accelerometer and a first angular rate sensor).

With regards to claims 21-24, the claims are commensurate in scope with claims 1-16 and are rejected for the same reason as set forth above. Furthermore, the references disclose a x-axis linear accelerometer, y-axis linear accelerometer, z-axis linear accelerometer, a roll angular rate sensor, a pitch angular rate sensor, a yaw angular rate sensor. (claiming three accelerometers and three angular rate sensors).

With regards to claims 25-34, the claims are commensurate in scope with claims 1-16 and are rejected for the same reasons as set forth above. (claiming an angular rate sensor and a linear accelerometer).

With regards to claims 35-42, 44-46, the claims are commensurate in scope with claims 1-16,21-24 and are rejected for the same reason as set forth above. (claiming three accelerometers and three angular rate sensors).

With regards to claims 57-58, the references further disclose the angular rate sensor is programmable by the processor or the data communication interface.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 13-16 and 47-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over either U.S. Patent 6,305,221 (Hutchings) or U.S. Patent 5,255,565 (Judd et al.) or U.S. Patent 5,615,132 (Horton et al.) in view of U.S. Patent 5,754,449 (Hoshal et al.).

With regards to claims 13-14, Hoshal et al. discloses a data recorder comprising, as illustrated in Figure 1, a humidity sensor 16 and a temperature sensor 14. (See, column 3, lines 15-44). It would have been obvious to a person of ordinary skill in the

art at the time of invention to have readily recognize the advantages and desirability of employing the humidity sensor and the temperature sensor as taught by Hoshal et al. to the apparatus of either of the references, Hutchings, Judd et al. Horton et al., to provide environmental conditions during handling and transportation of industrial applications at different transport modes or regions. (See, column 1, lines 9-20 of Hoshal et al.).

With regards to claims 15-16, the references further discloses a data communication interface for transmitting information to the processor.

With regards to claims 47-49, the claims are commensurate in scope with claims 13-16 and are rejected for the same reasons as set forth above.

Response to Amendment

6. Applicant's arguments with respect to claims 1-6, 8-18, 20-42, 44-49 and 57-58 have been considered but are moot in view of the new ground(s) of rejection.

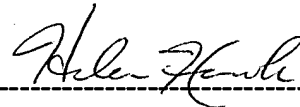
Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen C. Kwok whose telephone number is (571) 272-2197. The examiner can normally be reached on 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2856

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Helen C. Kwok
Art Unit 2856

hck
June 13, 2005

approved
K2
6/10/03

FIG. 2

